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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,084	11/06/2003	Karen P. Shrier	020327-079	8225
21839	7590	04/15/2005	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			EASTHOM, KARL D	
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ALEXANDRIA, VA 22313-1404			PAPER NUMBER	
			2832	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/702,084	<b>Applicant(s)</b> SHRIER ET AL.	
	<b>Examiner</b> Karl D. Easthom	<b>Art Unit</b> 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 29-44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6657532. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 recites all elements of claim 29 except that the path through which current passes is not claimed, but the device is inherently capable of the function since it is the same as that of applicant. For claim 30, see claim 2. For claims 31-32, these are obvious variations or are included in less than about 0.8 of claim 2, since they fall in that range such that one of skill would have surmised anything in the range to be covered. For claim 33, claim 3 recites all elements. For claim 34, this is covered by claim 33 which claims "and/or". For claims 35-38, these are met by claim 3 since "at least about 30%" is met by 20% since the term is broad. Similar remarks apply where at least 40% includes at least about 60% in the range. For claims 39, these are rendered obvious by a combination of claims 1 and 5 since all the elements are in the two claims, and it would have been obvious to specify the layer thickness where it is spelled out in claim 1, since one of skill would have recognized combinations can preclude infringement

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or combinations of different embodiments possess added attributes. Claims 43-44 are met by claims 4-5.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 29-32 are rejected under 35 U.S.C. 102(b) as anticipated by Ling et al. Ling discloses the claimed invention at Figs. 2-3 with voltage variable material 21 in contact with dielectric material 20. The thickness is 25 um thick at the top of col. 2, making each sheet of 20um less than 1 mil, where 1 mil = 25.4um. This meets claims 30-32 where “less than about” is a broad term. The dielectric layer is depicted as the same thickness as the voltage variable material. Also at col. 5, lines 25-45, the layers are the same thickness at 38um, which is less than about 1.6um also.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 29-32 are rejected under 35 U.S.C. 102(b) as anticipated by Azumi et al. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Azumi et al. in view of Ling et al. Under 35 U.S.C. 102(b) as being anticipated by Azumi et al. Azumi discloses the claimed invention at Figs. 7 with voltage variable material 3 in contact with dielectric material 16 or 7. The thickness

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is several tens um thick at col. 2, lines 20-30, making each sheet of 20um less than 1mil, where 1 mil = 25.4um. This meets claims 30-32 where "less than about" is a broad term. Note that the dielectric layer 16 may be omitted, at col. 3, lines 30-35, leaving only the dielectric layer 7 at the claimed thickness in contact with the other layers. While a plurality of layers are disclosed, there is one layer having the claimed thickness, and further, claim 1 contemplates only one layer. Or a plurality is two layers, which is 40um, which is less than 1.6 mils, and is less than about 0.2 mils where the term is broad. The binder is disclosed at col. 2, lines 15-20, with the particles the ZnO, CoOsub3 etc.

7. Under the 35 U.S.C. 103(a) alternative, where the thickness of a layer is not specified clearly due to a plurality of layers disclosed, Ling et al. at Figs. 3-4 disclose a single layer device along with a multilayer device such as that of Azumi, and discloses at the top of col. 3 that layers in the claimed thickness are employed to give a desired threshold voltage so that such a thickness would have been obvious to control the threshold, where the capacitor thickness or dielectric layers are all of the same thickness in Azumi and depicted the same thickness in Ling. Or the 38um thickness layers of Ling at col. 5, lines 25-45 meet "about" 0.2-1.6 where the term is broad.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D. Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE